

Response to Comments
Feather Falls Post-Fire Project

Sierra Pacific Industries (SPI), February 12, 2021:

1. *“SPI supports the purpose and need of this project...”* The Forest Service appreciates SPI commenting during scoping and participating in the collaborative development of this and other projects on the Feather River Ranger District.
2. *“The prompt implementation of the project would benefit the restoration of habitat, regeneration of the landscape, safety to the public and other landowners in the area, and the merchantability of the salvage timber.”* On January 25, 2021 the project was presented as a salvage project in the area nearby the Feather Falls Trailhead and Campground. In February, the hazard tree abatement and other parts of the project were briefly introduced as a separate trail safety and recreation proposal. After consultation with Forest and Regional staff, it was decided to propose the entire Feather Falls Post-Fire Project (PALS# 59385) to promote transparency and maximum collaborative participation.

On May 13, 2021 FRRD led a site visit with representatives of Mooretown Rancheria of the Maidu Indians of California, CalWild, SFL, Friends of Plumas Wilderness, Butte County Supervisor Debra Lucero, Sierra Pacific Industries, J.W. Bamford Inc., Butte County Department of Development Services, Butte Forest Advisory Committee, Butte County Fire Safe Council, Forbestown Ridge Fire Safe Council, CSU Chico, UC Davis, the Plumas National Forest Supervisor’s Office, and the Pacific Southwest (PSW) Research Station to discuss the project.

During the site visit, it was discussed that due to time constraints and the perishable nature of fire-killed timber that the salvage portion of the project should be authorized as soon as possible without waiting to complete the hazard tree abatement in IRA portion of the project. There was agreement in the group without any objection.

3. *“SPI supports the Forest Service’s assessment that this project falls within categories of work excluded from documentation of an Environmental Assessment (EA) or an Environmental Impact Statement (EIS)...”* The categorical exclusion framework (project record) explains why the two CE (36 CFR 220.6(e)(11) Post-fire rehabilitation activities and CFR 220.6(e)(13): salvage of dead and/or dying trees) are appropriate for this project. It provides a background to the project, a description of the proposed activities, why the activities fit within an established category, and addresses extraordinary circumstances.

Sierra Forest Legacy (SFL), April 27, 2021:

1. *“Provide clear description of which activity or suite of activities will be authorized under which CE category, including explanation of why an activity or suite of activities are deemed eligible under a specified CE category. This information will help the public better understand intended Forest Service actions.”* The categorical exclusion framework (project record) explains why the two CE (36 CFR 220.6(e)(11) Post-fire rehabilitation activities and CFR 220.6(e)(13): salvage of dead and/or dying trees) are appropriate for this project. It provides a background to the project, a description of the proposed

activities, why the activities fit within an established category, and addresses extraordinary circumstances.

2. *“Articulate goals and timelines for desired post-project fuelscape conditions and how these goals and timelines are to be achieved. This information will insure hazardous fuels reduction actions are both appropriate and achievable.”* The detailed silvicultural prescription (project record) establishes treatments for removal of fire injured or killed trees that will contribute to the stand objectives by reducing fuel loading and lowering the risk of post-fire beetle outbreaks. Improving landscape resilience to future disturbance events through density, size class, and species composition management will be critical to maintaining a healthy forested landscape. In most cases brush removal and/or oak pruning will effectively reduce competition for limited water and nutrients and reduce the susceptibility to future wildfire-caused tree mortality for many years. Forest restoration treatments will maximize the retention of resprouting oaks and other native hardwoods, to the extent that the trees promote stands that are resilient to insects and disease.
3. *“Articulate goals for desired long-term reforestation outcomes, and how these outcomes are to be achieved. This information will assure the public that actions we take today can grow into desired future forest conditions, rather than perpetuate the fire risk problems we face today.”* From the 2004 Sierra Nevada Forest Plan Amendment, desired condition is a statement describing a common vision for a specific land area. Appropriate to this project are wildland urban intermix and general forest.

Through the collaborative process, we have received guidance, advice, and literature from research foresters and ecologists from Pacific Southwest Research Station (PSW), Pacific Northwest Research Station (PNW), and University of California Davis (US Davis). After the May 13, site visit researchers from UC Davis and PSW have submitted study plans for portions of the Feather Falls Post-Fire project.

4. *“Regardless of which CE the FRRD intends to use for actions proposed within the IRA [Bald Rock inventoried roadless area], and whether or not that authorization is associated with a Decision Memo, the Forest Service must provide documentation of what considerations and rationale they have used to determine whether “extraordinary circumstances” apply to actions proposed within an Inventoried Roadless Area.”* The mere presence of one or more of these resource conditions does not preclude use of a categorical exclusion. It is the degree of potential effect on resource conditions that determines whether extraordinary circumstances exist. 36 CFR 220.6(b)(2). The inventoried roadless area review (project record) requested regional review of the Feather Falls Post-Fire Project to assure compliance with the 2001 Roadless Area Conservation Rule, per direction in the Roadless Area Review Process letter dated December 5, 2016. The region reviewed the project and determined it is consistent with the 2001 Rule, a WO briefing is not necessary, and it will protect roadless area characteristics.
5. *“Further regarding proposed actions along the trail system within Bald Rock IRA, the Forest Service must also address and document project issues as they relate to the Roadless Area Conservation Rule (RACR).”* In accordance with the Regional Forester December 5, 2016 memorandum regarding Roadless Area Review Process, we assured compliance with the 2001 Roadless Area Conservation Rule (RACR) (project record).

6. *“Our comments and recommendations regarding incorporation of Framework guidance, ICO structure, and new post-fire restoration modeling tools that we provided above for Berry Brush are incorporated here for Feather Falls.”*
 - a. PSW-GTR-270: Although PSW-GTR-270 has only been published since February of this year, we have worked and collaborated with contributors and with other research foresters and ecologists on post-fire projects involving the Camp Fire and now the Bear Fire of the North Complex. These interactions and the science on which the GTR is based informed our North Complex rapid assessment and subsequent prioritization of activities. Preliminary analysis using RAVG shows that over 100,000 acres of forestland was deforested by the North Complex Fire. Natural regeneration may be expected on some acres, but artificial regeneration (planting) will likely be needed as well. Meanwhile we are also documenting areas where fire improved ecological conditions.
 - b. ICO: We continue to work with researchers and to develop reforestation plans that explore and incorporate concepts, guidance, and findings that move us towards desirable future structure for reforestation efforts. After the May 13, 2021 site visit, researchers from UC Davis and PSW have submitted study plans for portions of the Feather Falls Post-Fire project. Derek Young proposes to study early post-fire forest dynamics (e.g. seedling establishment, fire injury to trees, and delayed mortality) to determine whether accounting for initial post-fire conditions can better explain regeneration patterns and therefore improve models for predicting post-fire regeneration, and serve as a baseline for repeat surveys of the same plots in future years, to understand how well initial recovery patterns relate to longer-term recovery success. Jianwei Zhang and Chris Looney propose establishing a test to gain key information on the effectiveness of cluster planting vs established practices under vegetation control.
 - c. Post-fire restoration modeling tools: Coppoletta (2020) applied a spatially-explicit model developed by Shive et al. (2018) to produce a five-year post-fire predictive map of potential conifer regeneration following the 2020 Claremont-Bear Fire on the Plumas National Forest. Merriam (2021) used spatial data compiled by Thorne et al. (2020) to identify vegetation refugia. These are areas where vegetation occurring prior to the North Complex Fire is expected to persist under future projected climates.
7. *“We agree there is a need to address hazardous trailside conditions that have resulted from the North Complex Fire along this highly recreated area. At the same time, we want to make sure the outcomes of any actions occurring with the Bald Rock IRA result in long-term desired fuel conditions. The PA briefly describes removal of trailside hazard trees, yarding by helicopter and feller bunchers, and chipping to reduce both falling hazards to trail users, and future fuels hazard of burned snags. Will the proposed actions insure remnant fuels do not themselves create imminent fire hazard conditions? We strongly urge the FRRD to establish a 5 to 10 year post-treatment plan for fuel management both within and outside the IRA that addresses how post-treatment fuels reduction benefits are maintained longer-term.”* Fuels projects absolutely require maintenance activities to achieve and continue to meet long-term desired fuel conditions. This project is developed to address near-term hazardous fuels conditions by removing

and/or rearranging fuels. It then authorizes a variety of maintenance activities to maintain those benefits.

8. *“Lastly, please let us know what the process will be whereby FRRD will respond to these comments (and those of others) prior to a decision on these projects, and how SFL can continue to engage in the process.”* We feel that we addressed many of these questions during the field trip and followed up regarding others immediately afterward. To be thorough and document the Forest Service response, these responses become part of the project record. The Feather River Ranger District remains committed to a collaborative approach to addressing our management activities. We continue to meet with interested parties in the forest, to utilize video platforms to hold meetings, chat, or share documents. As the country and California continue to reopen thanks to increasing vaccinations and falling transmission rates we look forward to additional opportunities to engage with shareholders.

California Wilderness Coalition (CalWild), Friends of Plumas Wilderness (FPW), May 17, 2020:

1. *“No project activities appear to be proposed in the Middle Fork Wild River Zone or any of the eligible tributary streams. However, potential cumulative impacts of project activities outside the river corridor on the Middle Fork’s outstanding scenery, recreation, fish, and geology values must be assessed and mitigated. Also, potential impacts on the Middle Fork’s eligible tributaries should be assessed in regard to future projects in response to the North Complex Fire.”* The Council of Environmental Quality (CEQ) regulations provide for categorical exclusions (CEs) to implement the National Environmental Policy Act (NEPA) for the purpose of reducing delay and paperwork. CEQ regulations allow Federal agencies to exclude from documentation in an environmental assessment (EA) or environmental impact statement (EIS) categories of actions that do not individually or cumulatively have a significant effect on the human environment. Based on the Agency’s experience and knowledge, the responsible official can conclude that if the action fits within an identified category and analysis shows there are no extraordinary circumstances, then the action would not have significant effects.
2. *“Any project in response to the North Complex wildfire must protect the area’s wilderness qualities and restoration efforts should focus on maintaining and restoring these qualities.”* The Forest Service agrees with CalWild that wild places can benefit from ecology-base restoration that works with nature and avoids roads and developing roadless areas. Hazard tree mitigation and subsequent fuels removal or rearrangement would be limited to the 7.3 miles Feather Falls Trail. Trees suffered 90-100% mortality where fire burned the hottest, particularly in the Middle Fork canyon and western portion of the burn area. Natural regeneration may be expected on some acres, but artificial regeneration (planting) will likely be needed as well. Climate analysis suggests that restoration of montane hardwood-conifer and montane hardwood vegetation types have high likelihood to persist. We also are working with Tribal government and other partners to identify opportunities to assist natural or artificial restoration of native plants especially those of cultural importance to native peoples.
3. *“The clear guidance in the plan is to protect the scenic qualities of the area and its semi-primitive non-motorized recreation values. The project is required to adhere to these specific standards and guidelines.”* The project will be in accordance with standards and

guidelines of the Plumas National Forest Land and Resource Management Plan (1988) as amended by the Sierra Nevada Forest Plan Amendment (2004).

4. *“IRAs are protected from road building and logging by the 2001 Roadless Area Conservation Rule (RACR).”* In accordance with the Regional Forester December 5, 2016 memorandum regarding Roadless Area Review Process, we assured compliance with the 2001 Roadless Area Conservation Rule (RACR) (project record).
5. *“Use of feller bunchers and large industrial chippers could result in significant soil disturbance in the IRA, Scenic Area, and along the FFNRT. The scenic and recreation qualities of the FFNRT should be fully protected and/or restored under the Project.”* Earlier proposals for the project were to use feller bunchers on ground that could support tractor-based logging systems. As the project was refined and collaborators discussed the IRA, non-IRA boundary on site during the visit it became evident that the IRA boundary was a convenient line at which to separate salvage operations and use of feller bunchers and hazard tree mitigation and use of other methods (e.g. helicopter yarding) to remove felled trees. It is advantageous to the trail and resources around the trail to keep the trail width close to original. The ability to chip fuels on site will greatly improve the ability to stabilize soils and speed up the conversion of fuels to organic matter in the soil. The project already will be expensive due to its nature. It is possible to require the use chippers that can have low impact on the trail as part of the management requirements of the project.
6. *“The Forest Service has developed a postfire restoration framework rooted in six science-based guiding principles. These principles include: restore key ecological processes, consider landscape context, promote regional native biodiversity, sustain diverse ecosystem services, establish a prioritization approach for management interventions, and incorporate adaption to agents of change. The framework principles should be followed in the Feather Falls Post-Fire Project.”* Although PSW-GTRR-270 has only been published since February of this year, we have worked and collaborated with contributors and with other research foresters and ecologists on post-fire projects involving the Camp Fire and now the Bear Fire of the North Complex. These interactions and the science on which the GTR is based informed our North Complex rapid assessment and subsequent prioritization of activities. Preliminary analysis using RAVG shows that over 100,000 acres of forestland was deforested by the North Complex Fire. Natural regeneration may be expected on some acres, but artificial regeneration (planting) will likely be needed as well. Meanwhile we are also documenting areas where fire improved ecological conditions.
7. *“North et al. recommend a “three zone” approach to reforestation within large areas of contiguous tree mortality. This approach works with natural recruitment from live seed trees around the periphery, a second zone encompassing accessible areas using a combination of planting clustered and regularly spaced seedlings that varies with microsite water availability and potential fire behavior, and a third zone defined by remote, steep terrain that limits reforestation efforts to the establishment of founder stands. The three-zone approach includes the early use of prescribed fire to build resilience in developing stands subject to increasingly common wildfires and drought.*

We believe that allowing areas with existing seed trees to reforest naturally and clustered reforestation planting in other areas is more likely to produce a landscape that meets the Forest Plan direction to protect the area's high visual quality and semi-primitive non-motorized recreation opportunities. In addition, reforestation should focus on re-establishing the diversity of the mix conifer and hardwoods forest using seedlings and cuttings from the site or region." We continue to work with researchers and to develop reforestation plans that explore and incorporate concepts, guidance, and findings that move us towards desirable future structure for reforestation efforts. After the May 13, site visit researchers from UC Davis and PSW have submitted study plans for portions of the Feather Falls Post-Fire project. Derek Young proposes to study early post-fire forest dynamics (e.g. seedling establishment, fire injury to trees, and delayed mortality) to determine whether accounting for initial post-fire conditions can better explain regeneration patterns and therefore improve models for predicting post-fire regeneration, and serve as a baseline for repeat surveys of the same plots in future years, to understand how well initial recovery patterns relate to longer-term recovery success. Jianwei Zhang and Chris Looney propose establishing a test to gain key information on the effectiveness of cluster planting vs established practices under vegetation control.

8. *Based on our May 13 field trip, natural regeneration of oaks, maples, madrone, and other hardwoods is already occurring from trunk bases and from seed. Hazard tree removal along the National Recreation Trail should avoid damaging this natural hardwood regeneration wherever possible.* Restoration opportunities linked to the decision framework include encouraging hardwood cover in areas of high conifer mortality. Native American cultural use and histories show a more open hardwood ecosystem in the past and the fire exposed a persisting hardwood component within the conifer overstory. According to North Complex climate analysis vegetation types that are most likely to persist in their pre-fire footprint by the end of the century include montane hardwood conifer, montane hardwood, and Sierra mixed conifer. The project proposal includes pruning close to the branch collar or flush with stem, side branches and multiple leaders from oak (or other hardwood) resprouts to encourage hardwood conversion from brush to trees.
9. *No herbicides or pesticides should be used in the reforestation component.* There is no proposal to use herbicides or pesticides in the reforestation component of the Feather Falls Post-Fire project. There is a proposal to establish a long-term peer-reviewed study to gain key information on the effectiveness of cluster planting versus established practices under vegetation control in the Govt 40 site. Objectives are to compare plantation establishment success between different planting configurations, where success is defined as achieving at least 80% planted tree survival and growth rates necessary to grow over competing shrubs and projecting being so at age five. Determine whether reforestation will be less successful under current lower planting densities lower if competing vegetation is not controlled. Determine whether stand growth and development vary between among planting configurations, assuming that herbicide application will yield comparable early reforestation success. Create a long-term platform for comparing how effectively planting configurations achieve objectives, such as structurally heterogeneous wildlife habitat. assess whether different planting configurations and vegetation control interact to alter fire hazard for the projected future. provide an infrastructure for future silvicultural prescriptions that manipulate stand

structure to create a resilient forest. This proposal would require a separate decision and would not affect activities around the Feather Falls trail or campground.

10. *Permanent fire control lines for future prescribed fire should be mapped and shared with the public for comment. Fire control lines should not adversely impact the semiprimitive recreation values and outstanding scenery of the area.* The project does not propose the establishment of permanent fire control lines. We propose cutting hand line before using prescribed fire to maintain reforestation and restoration activities.